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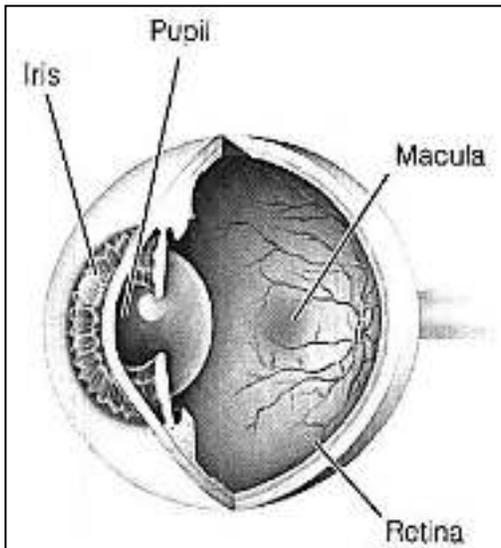
Age-Related Macular Degeneration (AMD)

What is macular degeneration?

Macular degeneration is a deterioration or breakdown of the macula. The macula is a small area in the back of the eye that allows you to see fine details clearly and perform activities such as reading and driving. When the macula doesn't function correctly, your central vision can be affected by blurriness, dark areas, or distortion. Macular degeneration affects your ability to see near and far, making it difficult or impossible to read, recognize faces, drive, or thread a needle.

Although macular degeneration reduces vision in the central part of the retina, it does not affect the eye's side or peripheral vision. For example, you could see the outline of a clock but not be able to tell what time it is.

Macular degeneration alone does not result in total blindness. Even in more advanced cases, people continue to have some useful vision and are often able to take care of themselves. In many cases, macular degeneration's impact on your vision can be minimal.



What causes macular degeneration?

Risk factors for AMD include older age, white race, a family history of AMD, and smoking. Macular degeneration is the leading cause of severe vision loss in people over 65.

There are two types of age-related macular degeneration, dry and wet. **Dry AMD** is the most common form. The macula slowly breaks down or withers, often with aging deposits called drusen. Vision loss is usually very gradual, often not noticeable at first.

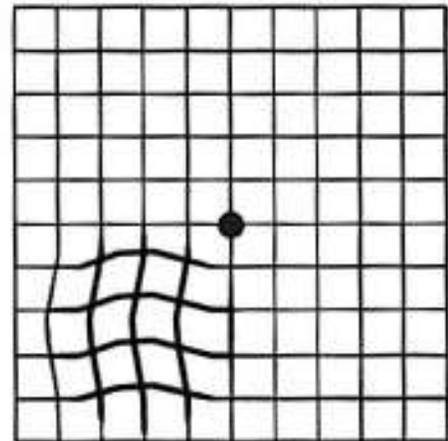
The **wet form** of macular degeneration accounts for about 10% of all macular degeneration cases. It results when abnormal blood vessels form underneath the retina at the back of the eye. These new blood vessels leak fluid or blood and blur central vision. Vision loss may be rapid and severe. Dry AMD can turn into wet AMD.

What are the symptoms of macular degeneration?

Macular degeneration can cause different symptoms in different people. The condition may be hardly noticeable in its early stages. Sometimes only one eye loses vision while the other eye continues to see well for many years. But when both eyes are affected, the loss of central vision may be noticed more quickly. The following are some common ways vision loss is detected.

- words on a page look blurred;
- a dark or empty area appears in the center of vision;
- straight lines look distorted, as in the diagram shown.

AMSLER GRID



How is macular degeneration diagnosed?

Many people do not realize that they have a macular problem until blurred vision becomes obvious. Ophthalmologists can detect early stages of macular degeneration during a medical eye examination that includes the following:

- a simple vision test in which you look at a chart that resembles graph paper (Amsler grid);
- viewing the macula with an ophthalmoscope;
- a laser assisted scan (OCT) of the retina that can detect distortion of the retina
- special photographs of the eye, called fluorescein angiograms, which are taken to find abnormal blood vessels under the retina. Fluorescent dye is injected into a vein in your arm and your eye is photographed as the eye passes through the blood vessels in the back of the eye.

How is macular degeneration treated?

Despite ongoing medical research, there is no specific treatment yet for dry macular degeneration. However, several healthy habits can decrease your risk of developing AMD, and reduce your chances of it getting worse. Quit smoking (if you smoke now), exercise regularly, maintain normal blood pressure and cholesterol, and eat dark green leafy vegetables such as spinach, kale, or collard greens.

Ocular Injections

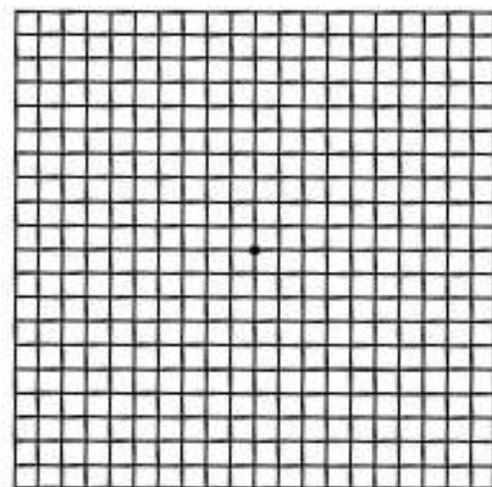
Certain types of wet macular degeneration can be treated with injections of medicine into the eye which block the growth of abnormal blood vessels. Although this sounds frightening, most patients who need the injections discover that they are not nearly as bad as they anticipated. However, despite advanced medical treatment, many people with macular degeneration still experience some vision loss.

To help you adapt to lower vision levels, Dr. Wareham may refer you to a low-vision specialist or center. A wide range of support services and rehabilitation programs are also available to help people with macular degeneration maintain a satisfying lifestyle.

Because side vision is usually not affected, a person's remaining sight is very useful. Often, people can continue with many of their favorite activities by using low-vision optical devices such as magnifying devices, closed-circuit television, large-print reading materials, and talking or computerized devices.

Testing your vision with the Amsler grid

You can check your vision daily by using an Amsler grid like the one pictured below. You may find changes in your vision that you wouldn't notice otherwise. Putting the grid on the front of your refrigerator is a good way to remember to look at it each day.



To use the grid:

1. Wear your reading glasses and hold this grid 12-15 inches away from your face in good light.
2. Cover one eye.
3. Look directly at the center dot with the uncovered eye.
4. While looking directly at the center dot, note whether all lines of the grid are straight or if any areas are distorted, blurred or dark.
5. Repeat this procedure with the other eye.
6. If any area of the grid looks wavy, blurred or dark, contact your ophthalmologist immediately.